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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/991,386
Filing Date: November 13, 2001
Appellant(s): CHRISTIAN ET AL.

William M. Lee, Jr., Reg. No. 26935
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/11/2006 appealing from the Office action mailed 7/15/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is substantially correct. In addition to the response of 9/13/2005, a response of 10/10/2005 was also filed and entered. As stated by the appellant, no amendments to the claims have been made after final.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,917,820	Rekhter	6-1999
6,073,178	Wong et al.	6-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-16, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rekhter (U.S. Patent Number 5,917,820) in view of Wong et al. (U.S. Patent Number 6,073,178), hereinafter referred to as Wong.

Rekhter disclosed a packet forwarding technique that uses router-unique tags as indices into a tag database, wherein the tags in the database include various address information such as IP addresses. In an analogous art, Wong disclosed a method for assigning IP addresses that uses

a router to monitor the assignments.

Concerning the independent claims, Rekhter did not explicitly state allocating an IP address to provide the first node with a unique IP address at which the first node may be contacted. Although Rekhter's system accesses information about various IP addresses, it does not explicitly complete the allocation step as presented in the previously amended independent claims. However, IP address allocation was well known in the art in various forms. This is evidenced by Wong's system which allocates available IP addresses and tracks the assignment of IP addresses using a router. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Rekhter by adding the ability to allocate an IP address to provide the first node with a unique IP address at which the first node may be contacted as provided by Wong. Here the combination satisfies the need for the greater reliability of IP addresses in a packet routing system. See Wong, column 2, lines 13-36.

Some claims will be discussed together. Those claims which are essentially the same except that they set forth the claimed invention as a server, a communications network node, or an IS-IS communications network are rejected under the same rationale applied to the described claim.

Thereby, the combination of Rekhter and Wong discloses:

• «Claims 1, 12, 15, 19, and 20»

A method of automatically allocating a unique internet protocol (IP) address to a first node in an integrated intermediate-system-to-intermediate-system (IS-IS) communications network said method comprising the steps of:

(i) accessing information about one or more potentially available IP addresses which may be allocated to provide the first node with a unique IP address at which the first node may be contacted (Rekhter, column 9, lines 10-42 and column 10, lines 60-66 and Wong, column 3, lines 22-40);

(ii) selecting one of the potentially available IP addresses to allocate to the first node (Rekhter, column 12, lines 4-14 and Wong, column 3, lines 1-11); and

(iii) sending information about the selected IP address to nodes in the IS-IS communications network (Rekhter, column 12, lines 20-28).

• «Claims 2 and 13»

A method as claimed in claim 1 wherein said information is sent using a flooding method comprising the use of link state PDUS (LSPs) (Rekhter, column 11, lines 38-45).

• «Claim 3»

A method as claimed in claim 2 wherein said information is sent using LSP extensions (Rekhter, column 11, line 59 through column 12, line 3).

• «Claims 4 and 14»

A method as claimed in claim 1 wherein said information is sent using a flooding method comprising an adaptation of the connectionless network service (CLNS) protocol (Rekhter, column 4, lines 16-32).

• «Claim 5»

A method as claimed in claim 1 wherein said step (i) of accessing information comprises accessing a server connected to the communications network (Rekhter, column 7, line 65 through column 8, line 29).

• «Claim 6»

A method as claimed in claim 5 wherein said information is sent using LSPs with anomalous sequence numbers (Rekhter, column 10, lines 24-25).

• «Claim 7»

A method as claimed in claim 1 wherein said step (i) of accessing information comprises accessing the first node which has pre-specified information about one or more potentially available IP addresses (Rekhter, column 7, line 65 through column 8, line 29).

• «Claim 8»

A method as claimed in claim 7 wherein said step (ii) further comprises receiving information at the first node about the IP addresses of other nodes in the communications network, and selecting one of the potentially available IP addresses on the basis of the received information (Rekhter, column 12, lines 4-14).

• «Claim 9»

A method as claimed in claim 8 wherein said information is received during a specified duration (Rekhter, column 12, lines 15-20).

• «Claim 10»

A method as claimed in claim 1 which further comprises using said selected IP address to access the first node using an Internet Protocol management system (Rekhter, column 3, lines 24-29).

• «Claims 11 and 16»

A method as claimed in claim 1 wherein said first node is selected from an intermediate system, a router and an optical multiplexer with integral router (Rekhter, column 7, lines 10-17).

Since the combination of Rekhter and Wong discloses all of the above limitations, claims 1-16, 19, and 20 are rejected.

(10) Response to Argument

In the remarks, the applicant has argued:

• «Argument 1»

The combination of Rekhter and Wong does not disclose the features of independent claim 1 and like independent claims because it does not disclose "allocating an address to a node in an integrated intermediate-system-to-intermediate-system (IS-IS) communications network" as recited in claim 1.

• «Argument 2»

Rekhter and Wong represent non-analogous art.

• «Argument 3»

The combination of Rekhter and Wong does not apply to an IS-IS communications network.

• «Argument 4»

There is no reasonable expectation of success in combining Rekhter and Wong.

• «Argument 5»

There is no motivation to combine Rekhter and Wong.

Argument 1 is presented in the first full paragraph on page 7 of the brief. The argument amounts to an assertion that the combination of Rekhter and Wong teaches none of the claimed

limitations. The claim defines "allocating an address to a node in an integrated intermediate-system-to-intermediate-system (IS-IS) communications network" as a set of three steps: an accessing step, a selecting step, and a sending step. In response to argument 1, it is maintained that the combination of Rekhter and Wong teaches these three steps and thus teaches the method for "allocating an address to a node in an integrated intermediate-system-to-intermediate-system (IS-IS) communications network" as recited in claim 1 and like independent claims.

Concerning step (i), the accessing step, Rekhter clearly states "accessing information about one or more potentially available IP addresses" as cited in the rejection. Again see Rekhter, column 9, lines 10-42 and column 10, lines 60-66. The information included in Rekhter's tag database meets the limitation of "information about one or more potentially available IP addresses." In support of the argument, the appellant has stated that "the tag in Rekhter is not 'a unique IP address at which the first node may be contacted'" on page 5 of the brief. This may be accurate, but in no way has the rejection attempted to align Rekhter's tags with the IP addresses of the claim. The information of the tag database (see Rekhter, figure 5) has been aligned to the "information" of the claim. All of the information in the tag database relates to IP addresses in the system (see Rekhter, figure 5, item 502). The appellant states in the first paragraph on page 6 of the brief that "the Examiner is incorrect to state that 'this tag includes IP addresses or related information'", however one can tell with a simple glance at the tag database of figure 5 that the tags include information about the IP addresses of the system. Again see Rekhter, column 9, lines 10-42 and column 10, lines 60-66.

The appellant also argues that "the tag values are based on parts of existing addresses which have already been allocated to those routers" on page 5 of the brief. First, it is noted that

this is an admission that the information stored in the tag database is information about the IP addresses of the system, although the appellant has strenuously argued that Rekhter does not disclose this as discussed in the previous paragraph. Second, the claim does not mandate that the addresses are available, they are only "potentially available." In terms of "addresses which may be allocated" the rejection has cited Wong as discussed in more detail in the following paragraph.

Further concerning step (i), the accessing step, Wong clearly states "IP addresses which may be allocated to provide the first node with a unique IP address at which the first node may be contacted" as cited in the rejection. Again see Wong, column 3, lines 22-40. First it is noted that the appellant admits that Wong does teach IP address allocation in the last paragraph of page 6 of the brief. The argument seems to be that Wong does not teach "a unique IP address" as claimed. However, it is maintained that Wong's "learned IP address" is in fact a unique IP address. As stated in the advisory action dated 10/25/2005, a learned address in Wong's system is an IP address associated with a trusted identifier. Although, in an exemplary embodiment, Wong may not refer to the address as "learned" until it is discovered by a router, the makeup of the "learned address" is the same at allocation. Thus Wong does state allocating a unique IP address to a node because he states allocating an IP address with a trusted identifier (also referred to as a "learned address") to a node. The applicant is directed to the Abstract of Wong which states inter alia, "As each IP address is assigned, the router associates the assigned IP address with an trusted identifier which identifies the client system." Again also see Wong, column 3, lines 1-11. Concerning step (ii), the selecting step, Rekhter clearly states "selecting one of the potentially available IP addresses" as cited in the rejection. Again see Rekhter, column 12, lines 4-14.

Clearly, Rekhter must select an IP address in order to effectuate packet forwarding and the sharing of tag information. Further, the IP addresses are "addresses to allocate to the first node" as Wong states the ability to allocate IP addresses to nodes as discussed in detail in the previous paragraph. Again see, Wong, column 3, lines 1-11.

Concerning step (iii), the sending step, Rekhter clearly states "sending information about the selected IP address to nodes in the IS-IS communications network" as cited in the rejection. Again see Rekhter, column 12, lines 20-28. Here Rekhter states exchanging and advertising tag information with other routers. The appellant has admitted as much in the first paragraph of page 6 of the brief by stating "Rekhter, of course, exchanges tag information with other routers." However, the appellant seems to argue that the sending does not take place in an IS-IS communications network. As discussed in the advisory action dated 9/22/2005, Rekhter clearly states a network of routers that communicate with one another. A router is considered an intermediate system. Moreover, Rekhter states the use of the ISO IS-IS routing protocol in his system. See Rekhter, column 11, line 59 through column 12, line 3. Rekhter's system is clearly designed to operate in a link state routing environment and the ISO IS-IS routing protocol is a link state protocol. Thus, Rekhter clearly discloses "sending information about the selected IP address to nodes in the IS-IS communications network."

In summary, Rekhter clearly states the accessing, selecting, and sending steps of the claimed method except for the ability to allocate IP addresses. However, the ability to allocate IP addresses was well known in the art as taught by Wong and as admitted by the appellant in the brief. Further, it is noted that although the claim states a method of allocating an IP address to a node, there is actually no allocation that takes place in the claim. The claim simply states steps

for accessing information, selecting addresses, and sending information about the addresses. Therefore any of the appellant's arguments that relate to the allocating of an IP address as presented in the claims are not persuasive, as such a limitation is not present in claim 1 and like independent claims.

Similarly, it is noted that in the appellant's summary of the claimed subject matter on page 3 of the brief the appellant states that the purported novelty of the present invention involves "allocation of a unique IP address to IS-IS nodes for management purposes". Again, no actual allocation takes place in the independent claims. Further, there is no mention of "management applications to be re-used for IS-IS management" or any kind of network management at all in the independent claims. The appellant is reminded that the claims should particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

Argument 2 is presented in the second full paragraph on page 7 of the brief. Despite the appellant's comments, it is maintained that Rekhter and Wong are analogous art. The appellant states that Rekhter and Wong "address entirely different technical issues." However, this is clearly incorrect. As stated in the rejection, Rekhter disclosed a packet forwarding technique that uses router-unique tags while Wong disclosed a method for assigning IP addresses that uses a router to monitor the assignments. Both systems clearly describe routers that effectuate packet forwarding in computer networks. See the Abstract, inter alia, for Rekhter which states a packet forwarding system that advertises tags among routers and the Abstract, inter alia, for Wong

which states a router that forwards packets based on trusted identifiers.

Argument 3 is presented in the last paragraph on page 7 of the brief. In response to argument 3, it is maintained that the combination of Rekhter and Wong does apply to an IS-IS communications network. As discussed above in relation to argument 1, Rekhter clearly states a network of routers that communicate with one another and routers are in fact intermediate systems. Plus, Rekhter states the use of the ISO IS-IS routing protocol in his system. In support of the argument, the appellant argues that one of ordinary skill with the teachings of Rekhter and Wong would have to go a further step in order to apply the teachings to an IS-IS communications network. This statement is unfounded as Rekhter clearly states the use of an IS-IS communications network as previously discussed. Moreover, both Rekhter and Wong are directed towards communications networks that utilize communications among a plurality of routers as discussed in the response to argument 2 above. The appellant admits that "a plurality of directly connected routers or other intermediate systems" is considered an IS-IS communications network on page 8 of the brief. Thus, it is unclear why the appellant feels that the combination of Rekhter and Wong does not apply to an IS-IS communications network. The added discussion of DHCP relay servers serves only to confuse the issue and does not address the fact that the combination of Rekhter and Wong clearly states a network of routers that communicate with one another as discussed herein.

Argument 4 is presented in the middle paragraph on page 8 of the brief. In response to argument 4, it is maintained that there is a reasonable expectation of success in combining

Rekhter and Wong. As previously discussed, Rekhter and Wong represent analogous art. See the response to argument 2 above. Both systems set forth similar types of packet forwarding via routers in computer networks. Rekhter's system is silent on possible processes to allocate IP addresses. However, Wong's packet forwarding system does discuss the allocation of IP addresses. The fact that Wong sets forth allocation techniques which support a greater reliability of IP addresses in a packet routing system and that Rekhter sets forth a similar packet routing system is clear evidence of a reasonable expectation of success for the combination. One of ordinary skill in the art working with packet forwarding in computer networks would clearly understand the packet routing system as set forth in Rekhter and would further clearly understand how to introduce address allocation into such a system as it is described by Wong. In addition, it is again noted that the appellant has admitted that the ability to allocate IP addresses was well known in the art as discussed above in response to argument 1.

Further it is noted that MPEP 2143.02 discusses in detail "Reasonable Expectation of Success". MPEP 2143.02 primarily deals with the chemical and biotechnological arts wherein there is an inherent level of unpredictability when combining prior art teachings. The electrical and computer arts are considered to have a high level of predictability. In predictable arts, the burden is on the applicant to show evidence that there is no reasonable expectation of success. Here, the appellant has failed to show sufficient evidence of there being no reasonable expectation of success as the appellant only makes a conclusive statement to this view without providing specific evidence. The appellant states that they "can see no reasonable expectation of success in attempting to combine an IP address allocation scheme with improved security (Wong) with an arrangement for efficient packet forwarding (Rekhter)," but has ignored the fact

that Wong also deals with increasing efficiency in packet forwarding. Given the purposes of Rekhter and Wong in addition to the detailed discussions of relevant methods for packet forwarding set forth in their disclosures, as well as the high level of predictability in the art, the examiner maintains the existence of clear evidence of a reasonable expectation of success for the combination.

Argument 5 is presented in the last paragraph on page 8 of the brief. In response to argument 5, it is maintained that there is motivation to combine Rekhter and Wong. Since the final action dated 7/15/2005, the appellant has argued that there is no motivation to combine Rekhter and Wong but has continually failed to address the motivation cited in the rejection. As discussed in the advisory actions dated 9/22/2005 and 10/25/2005, it is maintained that the motivation presented in the rejection is sufficient motivation to combine the references. Again see Wong, column 2, lines 13-36. Wong clearly sets forth the need for greater reliability of IP addresses in a packet routing system. His address allocation techniques solve this problem and would be applicable to other similar packet routing systems (such as Rekhter's system), thus making this sufficient motivation for one of ordinary skill in the art to combine the references. Concerning the statement that "the Examiner has exercised impermissible hindsight reasoning," it is maintained that the obviousness rejection described above takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made (as disclosed by Rekhter and Wong), and does not include knowledge gleaned only from the applicant's disclosure. Thus, the rejection is proper.

The examiner respectfully dismisses the insulting assertion that "the references cited

seem to have been selected more for the appearance of 'search keywords' than to any relevance to the present invention" as it has been shown above in the rejection, and additionally in the response to argument 1, that the combination of Rekhter and Wong discloses all limitations as claimed.

For the above reasons, it is believed that the rejections should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,

/D. C./
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